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(21)Application number : **09-016564** (71)Applicant : **MITSUBISHI CHEM CORP**

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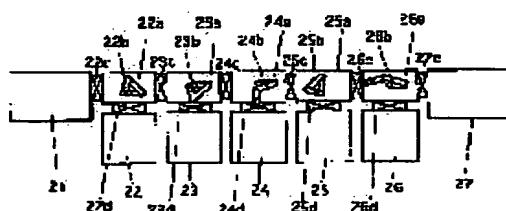
(54) MANUFACTURING DEVICE AND MANUFACTURE OF ORGANIC ELECTROLUMINESCENT ELEMENT

(57)Abstract:

PROBLEM TO BE SOLVED: To prevent respective layer-shaped deposits from contacting with moisture and oxygen in the atmosphere, and inexpensively manufacture an organic electroluminescence element excellent in a light emitting service life characteristic by consistently processing a base board without being exposed to the atmosphere in respective processes and a transfer process up to sealing after a pattern of an anode is formed.

SOLUTION: A base board on which an anode is formed as a pattern is arranged in a dry box 21, and after a base board surface is cleaned, it is sufficiently substituted with inert gas.

Afterwards, the base board is carried and processed in order in working vacuum chambers 22 to 26 by respective prescribed operations of gate valves 22c to 27c and



22d to 26d, carrying vacuum chambers 22a to 26a and base board and mask carrying robot arms 22b to 26b. After respective layers are formed on the base board by these processings, the base board is not exposed to the atmosphere until a seal is completed by the dry box 27 filled with inert gas. Therefore, an organic electroluminescence element excellent in a light emitting characteristic and a light emitting service life characteristic can be inexpensively manufactured with excellent productivity.

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CLAIMS

[Claim(s)]

[Claim 1] In the equipment for manufacturing the organic electroluminescence devices which come to prepare two or more stratified deposits on a substrate The vacuum chamber for conveyance with carrying-in opening and taking-out opening of a substrate, and the working-level month vacuum chamber which stands in a row through the bulb which can pass [that vacuum transfer cutoff is possible and] said substrate in this vacuum chamber for conveyance, A migration means to be installed in this vacuum chamber for conveyance, and to transport a substrate into this working-level month vacuum chamber from said carrying-in opening, and to transport to said taking-out opening from this working-level month vacuum chamber, It is the organic electroluminescence-devices manufacturing installation equipped with the 1st thru/or the n-th unit for migration and processing which has this processing means for stratified deposit formation established in this working-level month vacuum chamber. So that the substrate introduced in this manufacturing installation may be transported from carrying-in opening of the 1st unit to the n-th unit through this unit The manufacturing installation of the organic electroluminescence devices characterized by connecting taking-out opening of the unit of the substrate migration direction upstream to carrying-in opening of the unit of the substrate migration direction downstream.

[Claim 2] The manufacturing installation of the organic electroluminescence devices which are equipment for manufacturing the organic electroluminescence devices which come to prepare the seal member surrounding this stratified deposit while preparing two or more stratified deposits on a substrate, and are characterized by to have the facility for preparing said seal member, without exposing to atmospheric air after forming all stratified deposits in the manufacturing installation of the organic electroluminescence devices which prepared the following stratified deposit, without exposing to atmospheric air after preparing one stratified deposit.

[Claim 3] The manufacturing installation of the organic electroluminescence devices characterized by the equipment for preparing said stratified deposit on a substrate being a manufacturing installation according to claim 1 in claim 2.

[Claim 4] The manufacture approach of the organic electroluminescence devices characterized by to prepare said seal member, without exposing to atmospheric air after forming in the approach of manufacturing the organic electroluminescence devices which come to have the stratified deposit by which deposition formation was carried out, and which has an anode plate, an organic luminous layer, and cathode at least, and a seal member surrounding this stratified deposit to the shape of a layer on a substrate and this substrate, without exposing an organic luminous layer and cathode to atmospheric air within a vacuum tub at least among these stratified deposits.

[Translation done.]